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An economic analysis of the differences in responses and help-seeking behavior of women victims of spousal violence in the Philippines[1]

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This paper analyses the behavior of women victims of spousal violence in the Philippines, and the determinants and factors affecting their decision to respond or seek help. Using the 2008 Philippine National Demographic and Health Survey, we model the response behavior of women victims to be a random utility maximization problem in which they face a set of discrete and unordered strategy alternatives that have different expected utilities and level of appropriateness to their experience of domestic violence. Results of our multinomial logit regression reveal that women's decision and differences in their response and help-seeking behavior are affected by their socioeconomic characteristics; the marital capital of her relationship; and the kind, combination, and consequences of the violence. The results also reveal that women seek third-party intervention not based on the experience of violence per se but on the materiality and tangibility of consequences sustained. From our regression results, we provided inputs to the implementation of Republic Act 9262 in order to better help women cope with, adjust to, defend themselves, and recover from domestic violence.

JEL classification: D10, D19, D63, I38, J12
Keywords: domestic violence, women victim responses to violence, help-seeking behavior, RA 9262

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1. Introduction

In recent years, the phenomenon of violence against women—domestic violence in particular—has been identified by the Philippine government, together with the international community, as a serious human right violation and a public health concern. The increasing body of research highlights the health burdens, intergenerational effects, and demographic consequences of such violence against women and even children (Heise, Ellsberg, and Gottemoeller [1999]; Kishor and Johnson [2004]) and emphasizes how it restricts access to opportunities, violates women's dignity as human beings, and poses a serious threat to the economic mobility, gender equity, and development of a nation.

Due to the complexity and inherent sensitivity of the issue of violence against women, most discourses have framed it as a private domestic issue where the public cannot interfere or meddle with, resulting in legislations addressing it coming up only until recently. In the Philippines, although legislation against domestic violence (Republic Act 9262 or the Anti-Violence against Women and Their Children Act) was enforced in 2004, prevalence of spousal violence has remained high [PNP data, World Bank 2012]. Stories of abuse presented by women survivors are persistent reminders that it is one thing to have a law and another thing to diligently implement its provisions [Amnesty International 2009]. Research conducted by various organizations also identified huge gaps that result in the law failing to offer protection to women and their children and poorly enhancing the capabilities of institutions to address domestic violence [USE RA 9262, 2011].

Quantitative economic studies, as one of the approaches to domestic violence, are useful in validating and probing into these findings but are rather few. More often than not, these studies focus on the aggregate patterns and trends in the occurrence of domestic/spousal violence without much respect to the individual motivations of perpetrators and responses of victims. On the other hand, while a great deal of qualitative researches have been conducted in the country that produced valuable insights on domestic violence, a comprehensive analysis of a nationally representative data and trends contextualized in the Philippines to complement or validate these statistics is long overdue. The insights will be invaluable especially in strengthening and implementing national legislation, and deepening our grasp of the issue.

In this study, we aim to probe into the phenomenon of domestic violence from the victim's point of view and examine her behavior in

the face of violence. Violence comes in many forms: physical, sexual, and emotional. We also acknowledge that it may happen for various reasons, and preventing violence per se is a complex task. It is rational to assume, however, that no woman, if given the option, will choose to endure a violent home or marriage. Using a random utility maximization framework, we assume that violence is given; then we estimate and investigate the factors that motivate the differences in their responses and help-seeking behavior, and in turn capture their choices in addressing domestic violence in the household.

Using nationally representative data from the 2008 National Demographic and Health Survey (NDHS), we also aim to provide an analysis of the trends and characteristics of domestic violence in the Philippines to validate qualitative studies done in the country and provide inputs for policymakers on how to improve the implementation of the law to help women better cope with, adjust to, and recover from domestic violence.

2. Review of related literature

2.1. Developing an economic framework for domestic violence

What does an economic analysis of women's responses entail? To a large extent, although the literature on domestic violence (DV)—especially in the disciplines of sociology, criminology, and psychology—is vast, the literature within economics is rather few. Descriptive and multicountry studies conducted by governments and various organizations (Laing and Bobic [2002]; Garcia-Moreno et al. [2005]) exposed its crippling and severe repercussions on women and their countries. Most economic literature, on the other hand, is focused on examining economic outcomes such as women's employment [Lloyd 1997] and overall costs to the victim and the society [Greaves, Hankivsky, and Kingston-Riechers 1995].

To assess the economic dimensions of domestic violence, it is necessary to identify the factors that increase the likelihood of people becoming victims or perpetrators of such violence. Yet the literature already reveals that no single factor can pinpoint why one individual, community, or society is more or less likely to be victims of violence. Consistently, studies have shown that domestic violence is a complex phenomenon rooted in the interaction of many factors ranging from the biological to the political [Waters et al. 2004]. It may also be a combination of exogenous and endogenous elements.

However, an economic approach to domestic violence remains useful if it follows and applies Becker's argument that the study of economics is also a science of human behavior [Becker 1976]. We can assume that domestic violence as a phenomenon has costs and benefits to parties involved (i.e., the husband and wife), and each actor decides his or her actions based on a utility-maximizing calculus of explicit and *shadow* prices. Furthermore, an economic analysis can contribute to this multidisciplinary and integrative research on domestic violence by presenting a behavioral model of the household. It looks at domestic violence not only in terms of its prevalence and effects but also in terms of the dynamics of the household and the distribution of welfare and gains among its members [Pollak 2000]. While it does not capture a complete and perfect explanation of domestic violence, an economic framework offers a simplified portrait of inequitable intra-household distribution and its spillovers to society and the economy, and can strengthen the argument that violence against women is indeed a public/social problem that must be seriously addressed.

2.2. The economics of the family and economic approaches to domestic violence

To proceed with an economic analysis of domestic violence, the researcher should address two interrelated issues: (1) definition and measurement and (2) modeling and specification.

All researches involving family violence are confronted by definitional and conceptual dilemmas. Most specifically, this pertains to definitions of what constitutes domestic violence and what acts should be considered wrong and condemnable. We acknowledge that there is no universally accepted definition of domestic violence or violence against women [Kapoor 2000]. In fact, definitions are chosen and shaped depending on the nature and objectives of research or policies.

In this study, we aim to assess *quantitatively* the circumstances of violence and its characteristics that affect the probability and forms of women victim's response. It is then imperative to use an objective, valid, ethical, and reliable method to measure violence and its correlates. Furthermore, our definition should avoid the bias that precludes the idea that men can also be victims and women can also be perpetrators of violence.

In order to address these issues, our data set uses the conflict tactics scale (CTS) as the method to measure intrafamily violence. Developed and later on revised and condensed by Straus [1979, 1990], the theoretical

basis of the CTS is the conflict theory. This theory separates *conflict* as an inevitable part of all human association, from *violence* as a tactic to deal with conflict. Conceptually, there is a spectrum of reasons why partners fight or disagree, either low-level ones such as what food to eat, or serious matters such as adultery. Cognizant of this wide range of issues that normally arise from marriage and family life, the extent by which one partner actively uses violent acts to win or resolve the conflict is what we consider domestic violence. The CTS measures the extent (severity and frequency) to which specific tactics or actions, including acts of physical violence, have been used. It is not intended to measure attitudes about conflict or violence nor the causes or consequences of using different tactics [Straus 1979]. We further elaborate on this methodology in section 5.

Another important challenge to economic approaches to DV is the appropriateness of modeling the family in relation to domestic violence. Microeconomic theory traditionally has regarded the household as the basic decision-making unit, with well-defined consensus preferences maximized, subject to budget and production constraints (Becker [1981] in Behrman [1997]). Yet, as an outcome of theoretical advances, empirical studies, and anthropological insights, this has been challenged by nonconsensus advocates, which treat household members as distinct individuals with conflicting as well as common interests (Basu [2006]; Manser and Brown [1980]). They include the probability of the family being dysfunctional and violent in view of the fact that intrahousehold distribution and welfare can be unequal.

Domestic violence in this noncooperative context is determined by individual utility optimization. Tauchen, Witte, and Long [1991] and Farmer and Tiefenthaler [1997] modeled a noncooperative game in which violence is determined by the level of resources each spouse controls (income and transfers) and whether the reservation utility constraint (utility of being outside the marriage) is binding. Because these studies have been based on small nonrepresentative samples, empirical studies of wife's economic dependence and marital capital and its relationship to violence have produced somewhat mixed results [Pollak 2000]. There are also problems in modeling assumptions and identification issue, such as the probability that the woman can also hurt her husband and one spouse does not always dominate the bargaining.

Another approach/study by Bloch and Rao [2002] used qualitative, anthropological evidence to construct a theoretical model for domestic

violence. The difference in approaches and focus of these studies point out that factors and contexts affecting domestic violence are wide, complex, and irreducible. It may range from the economic and material dimensions to cultural, anthropological bases, all of which must be taken into consideration by any explanatory model.

Modeling domestic violence is important in studying victim's responses because the correlates of domestic violence may have an effect on the probability and expected utility from a particular mode of action. In this study, however, given data set limitations, we assume that violence is given and established as indicated by women's answers to the conflict tactics scale.

In this study, our model is guided by the objectives of this paper and the available data set, which is not about how to prevent domestic violence per se considering its complexity (it is not about with or without violence). Rather, it is about how to help women cope with, adjust to, or defend themselves and recover from the adverse outcomes of domestic violence.

2.3. Victim responses to domestic violence

The studies above have so far established an economic framework but still are incomplete in providing us a picture of how domestic violence affects intrahousehold welfare and resource distribution. While research involving a small sample of survivors can provide rich information about women's needs and experiences, little is known about women's responses to violence in general and at the population level, including the help that women receive from informal networks such as families and friends, and more formal institutions [Garcia-Moreno et al. 2005].

Women's response is an important subject of investigation because it is a channel through which the adverse impacts of domestic violence spill over or get transmitted to the community and to the society. We are interested in how they handle the situation, how it affects their welfare and productivity, and how can we help them whenever they are violated.

Oyediran and Abanihe [2003] argued that programs and interventions are useless without understanding attitudes and perceptions toward domestic violence. In their study, they found 66 percent of married Nigerian women agree that husbands have the right to beat them. Even a significant 60 percent believes that marriage is not consummated unless the husband beats the wife. The woman's perceived normality of the violence and cultural beliefs are thus important facets to consider.

Aside from personal perceptions and values, the presence and effectiveness of institutional support also affect the help-seeking behavior of women. Garcia-Moreno et al. [2005] report that the differences in women's help-seeking behavior reflect a combination of factors, including the victim's willingness to seek support from agencies, the effect of different barriers to accessing services, and the relative availability of these services, as well as their responsiveness. A study by the World Health Organization (WHO) [2005] also found out that informal networks such as friends and families are the preferred and first point of contact by victims rather than formal institutions like the police.

The severity and frequency of violence is also an important variable to consider [Garcia-Moreno et al. 2005]. Those who have experienced more severe violence or endured more debilitating effects were those who sought help more frequently from an agency. The woman feared the consequences of reporting or retaliating, either on her own safety or on her children's, including shame and embarrassment in the community (Jacobson [1996]; Campbell et al. [1998]; Ellsberg [2001]). Furthermore, the varieties of responses, ranging from silence, retaliating, and leaving, are seen to develop as a process rather than a one-time event [Campbell and Soeken 1999].

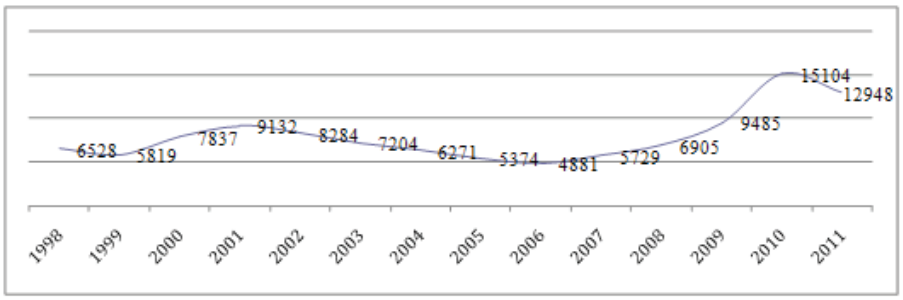
The random utility maximization approach can be applied in examining the decision of women victims to respond (seek help or fight back) to violence. A woman's response to her experience of domestic violence can be framed as a choice contingent on the utility-maximizing gains she will achieve in her action and on factors that constrain her options and environment to do so.

We note, however, as Nussbaum [2001] argues, that women under duress and victimized by domestic violence may not in fact have informed preferences, as economic theory would suggest. Instead, there may be cases of "adaptive preferences" in which the preferences of individuals in deprived circumstances are "deformed" by poverty, adverse social conditions, and political oppression.

Our data set cannot capture these nuances and complexities, but a quantitative economic study exploring the basic problem structure and decision set available to women nuanced in the Philippine experience is still worth undertaking. This shall be the subject of investigation in our study.

3. Trends and characteristics of violence against women in the Philippines

Domestic violence is a significant phenomenon in the Philippines. Figure 1 shows the number of cases of violence against women (VAW) reported to the Philippine National Police (PNP) nationwide.



Source: Philippine National Police.

Figure 1. Number of VAW cases reported to the PNP (in hundreds), 1998-2011

The figures reveal the high prevalence of domestic violence in the Philippines, even posting an upward trend from 2006 to 2011. The increasing trend can either be an outcome of the reliability of enforcement of the Anti-VAW law in 2004 (more women perhaps are seeking relief from the police) or an indication of the worsening of the problem. Nevertheless, this shows that violence against women is widespread at the national level.

Official statistics, however, may reflect only a fraction of the actual cases. After all, the statistics are contingent on those who report to the police and thus limit the data to those who sought help or complained to begin with. To a large extent, not all reported cases of domestic violence may show up in the official VAW statistics as these are, in many instances, not yet gender-disaggregated. There is also often the risk of double-counting (WOAT [2003]; FIND et al. [2009]).

In this research, we use the data from the National Demographic and Health Survey of 2008. The NDHS data confirm that domestic violence is a significant phenomenon among married women in the Philippines. Out of the 7,157 ever-married women chosen to answer the domestic violence questionnaire, 19.1 percent, or 1,368 women, experienced any kind of violence from their husbands in the last 12 months. A woman may experience a particular type of violence or, worse, a combination of types.

The most prevalent type is emotional violence with 8.4 percent, followed by other combinations (physical and emotional, or emotional and sexual) at 4.8 percent.

The NDHS confirms the high prevalence of domestic violence reported to PNP. The data show that almost one-fifth of women have experienced violence without taking into consideration yet whether or not to seek help from authorities. Domestic violence is indeed a reality faced by many married women in the Philippines. These figures imply that women are exposed not only to threats but also to the costs and negative impacts on their lives and well-being.

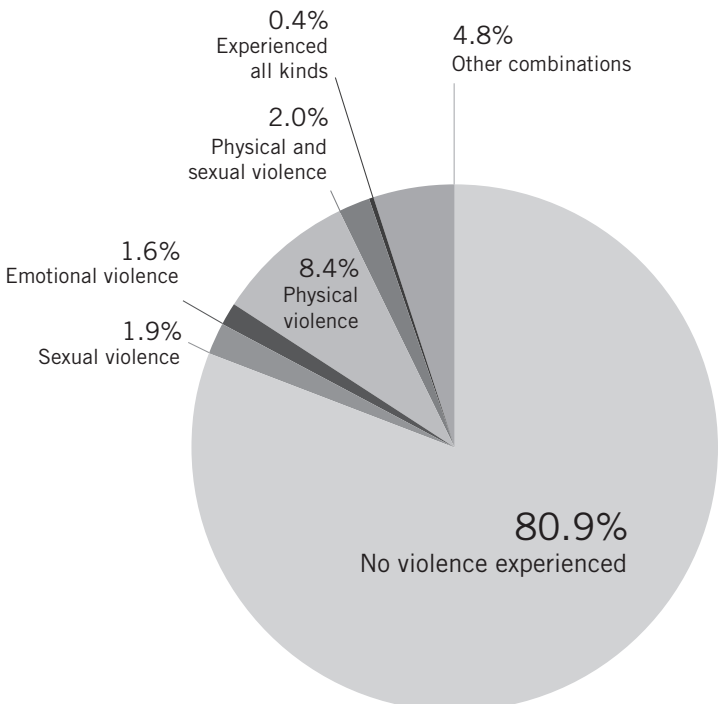
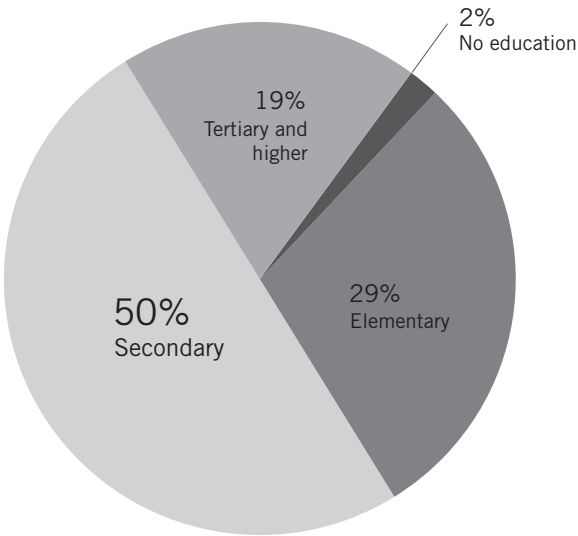


Figure 2. Occurrence and types of violence (n=7174)

The background and context of violence against women are important in determining the victims' exposure to risks and understanding their unique experiences of violence. If we profile the 1,368 women who reported violence, Figure 3 [n=1368] shows that the majority of women who experienced violence have average educational attainment (secondary level).



Source: NDHS 2008.

Figure 3. Educational attainment

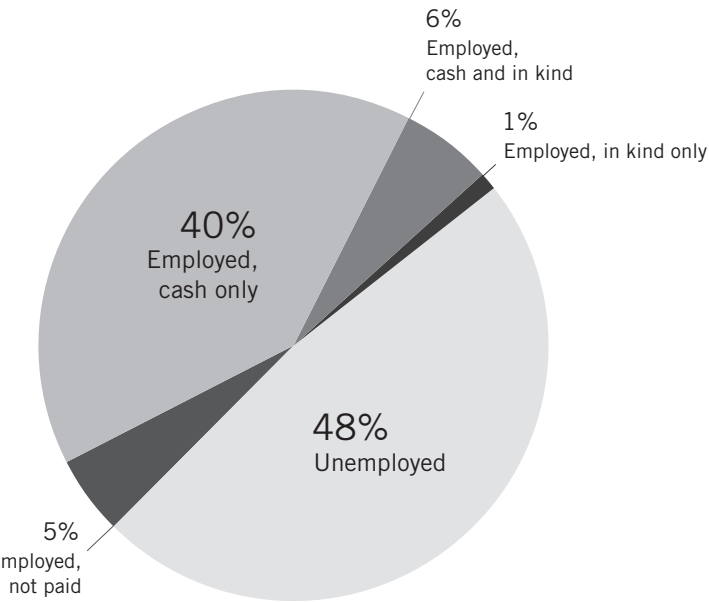


Figure 4. Employment status

The employment status of victims, on the other hand, is relatively equal in distribution as shown in Figure 4. Half of the sample constitutes the unemployed, and the other half the productive members of the population. The differences matter, however, on the compensation received by women from their labor.This gives a picture of the kind of employment the victims engage in. Together with education, it calls attention to the possible significant effect of human capital and resource pool contribution on the probability of violence.

Figure 5 shows that the number of victims within a higher wealth quintile is significantly smaller in proportion compared to their poorer counterparts.The disparity in proportion is very clear between the poorest and the richest quintile: only 8 percent of the victims belong to the richest quintile compared to 31 percent belonging to the poorest ones. A strong class dimension to the phenomenon of domestic violence is then very apparent.

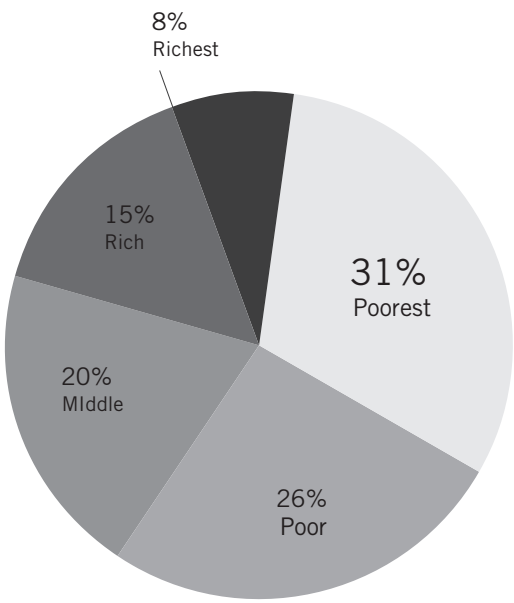


Figure 5. Wealth quintile of women victims (n = 1,368)

The NDHS asked women victims about the consequences of violence. Specifically, they were asked if, as a consequence of the beating, they ever had physical injuries or psychological suffering. Table 1 shows the physical and psychological consequences to women according to the kind or combinations of violence experienced. On average, almost two-thirds (63 percent) of the women victims experienced any of the specified consequences as a result of the violence done against them. In all kinds of violence, majority experienced psychological distress. Worse, an average of 10 percent in every combination of violence attempted to commit suicide. Bruises, cuts, and deep wounds were the most prevalent physical injuries experienced.

Table 1. Consequences of spousal violence

Type of violence (in the last 12 months)	Cuts, bruises, or aches	Eye injuries, sprains, dislocations, or burns	Deep wounds, broken bones, or any other serious injury	Lost your job/ source of income	Depression, anxiety, sleeplessness, feeling of isolation	Attempted to commit suicide	Any of the specified consequences	Number of ever-married women
Physical violence only	17.9%	5.2%	3.7%	2.2%	42.5%	4.5%	50.7%	134
Sexual violence only	7.0%	2.6%	0.0%	1.8%	35.1%	0.0%	36.8%	114
Physical and sexual violence	28.6%	10.7%	3.6%	10.7%	57.1%	7.1%	64.3%	28
Other combinations	30.9%	14.5%	4.0%	8.1%	62.1%	17.1%	71.1%	346
All kinds	61.8%	25.7%	12.5%	19.4%	86.8%	25.7%	93.0%	144

Source: NDHS 2008, authors' computations.

The figures reiterate that domestic violence is costly. When a woman is hurt, the pain does not end when the fighting stops. There are real and severe repercussions that gravely undermine the well-being of women.

The subject of our investigation is the differences in the help-seeking behavior and responses of the women victims of spousal violence. All ever-married women who reported experience of physical or sexual violence were asked a series of questions about their help-seeking or coping behaviors. Figure 6 shows how many women victims sought help and how many fought back.

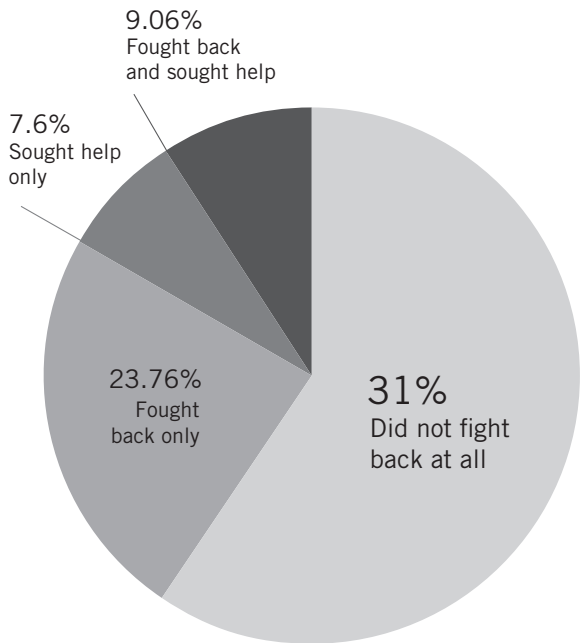


Figure 6. Women's responses to violence (n=1,368)

The choice to fight back or seek help is not always the dominant response among victims as shown by the large proportion of women who did not respond at all (59.58 percent).The 23.76 percent who fought back only implies that these women chose to keep the violence exclusively between herself and her husband and resolve it by themselves. The 7.6 percent who sought help from someone (family, friends, or outside institutions) implies that they actively sought a third party to intervene and mediate. Some of them (9.06 percent) chose to do both.The factors that account for these differences are the subject of our study.

3.1. The Anti-Violence against Women and Their Children Act of 2004 (RA 9262)

Public policy and the legal system always have the power to protect women from harm and violence.The enactment of Republic Act 9262 was a march toward this ideal in line with the interest of the Philippines to align its state policy with international initiatives to enshrine human rights and protect women from discrimination.The Anti-VAWC law emphasizes government's intent to protect women by criminalizing one of its most

pervasive forms.Although forms of violence were already penalized under current Philippine laws, the Anti-VAW law emphasized and addressed the vulnerability of women to abuse.

To provide protection for abused women, corresponding penalties are identified such as imprisonment, large fines, and protection orders. The provisions are rather detailed and enumerate the reliefs available (RA 9262, section 8).The stipulations in the law establish a legal framework that declares violence against women and children as a *public crime*.This implies that (a) violence against woman is a crime not only against the individual but against the entire society and (b) any individual with public knowledge of the circumstances is authorized to file a complaint.

Critics have identified various challenges to the Anti-VAWC law. For example, Guanzon [2008] notes that despite providing sufficient reliefs and being the most punitive domestic violence law in Asia and the Pacific, the law lacks specific appropriation for agency training and development to advance support for women. USE RA 9262 [2011] also identified gaps in its implementation: rights-holders remain unaware of their rights, perpetrators continue to exploit the loopholes in the law and in the legal procedures, and members of the judiciary demonstrate gross ignorance of and disregard for the provisions of the law. As always, having a law on paper is different from having an effective and well-implemented law.While an intact framework identifies areas of intervention, it is confronted by the challenge to exercise due diligence in implementation. We are interested in how the implementation of the law can be further improved based on how women behave and make choices if they are violated.

In summary, the trends and characteristics presented illustrate the magnitude and variety of the context and experiences of domestic violence in the Philippines. Violence against women cuts across class, educational attainment, location, and other socioeconomic characteristics. Worse, it generates negative consequences that harm and put the women at the serious disadvantage.

4. Empirical model

We construct a model of the choice to respond (fight back or seek help) based on the structure of the available data from NDHS 2008. Our model assumes that the woman is married and entered the relationship in order to attain a utility higher than outside the relationship. From a noncooperative viewpoint, we assume that the wife and husband collectively bargain

to maximize a household utility function constrained by their pooled resources or stream of resources. Likewise, each of the members of the household maximizes his or her distinct utility function, and the household utility function is the weighted average of these utility functions.

This assumption allows us to see cooperation among members but nevertheless open to fractiousness and disagreement. We will not look at the determinants of domestic violence and instead take it as a given, such that violence $V = 1$. Because domestic violence is costly, we assume also that a particular level of costs and consequences, C, is given and is the outcome of the presence of violence, V. We can then appropriate a model of women's response to domestic violence informed by the random utility maximization framework as a choice set R defined as:

$$R = \begin{cases} 0 \text{ if no response at all} \\ 1 \text{ if fight back physically and/or verbally only} \\ 2 \text{ if seek outside help only} \\ 3 \text{ if both fight back and seek help} \end{cases} \quad (1)$$

The decision to respond is a decision under uncertainty. The reason for this is that the woman's choice to fight back or seek help does not always have positive outcomes that will effectively end her husband's violence and solve their conflict. The woman has the choice among four strategies: (0) she may choose to be silent and do nothing at all in response to the violence, (1) she may deal with it privately by fighting back physically and/or verbally, (2) she may seek help publicly or from a third party (informal networks, formal institutions), or (3) she may choose to both fight back and seek help. Involving a third party means the woman employs public coping as a strategy to end or adjust to domestic violence.

These choices available to the woman given violence are discrete and unordered. No option or strategy is necessarily better or worse than the other, so there is no fixed order or hierarchy among existing alternatives. If she chooses strategies (1), (2), or (3), her payoff will depend on whether or not she succeeds in ending the violence and minimizing the negative consequences of her husband's act. If she does, she is clearly better off than under strategy (0). Otherwise, she is worse off. Furthermore, the differences among strategies (1), (2), or (3) and the ultimate choice of the woman are contingent on an individual-specific and implicit hierarchy of preference between the perceived utility from private and public coping—that is, the necessity and effectiveness of involving a third party based on the

circumstances of the conflict.The involvement of a third party is not always the best option.Therefore, the choice of a strategy is a nontrivial one.This decision tree is illustrated in Figure 7.

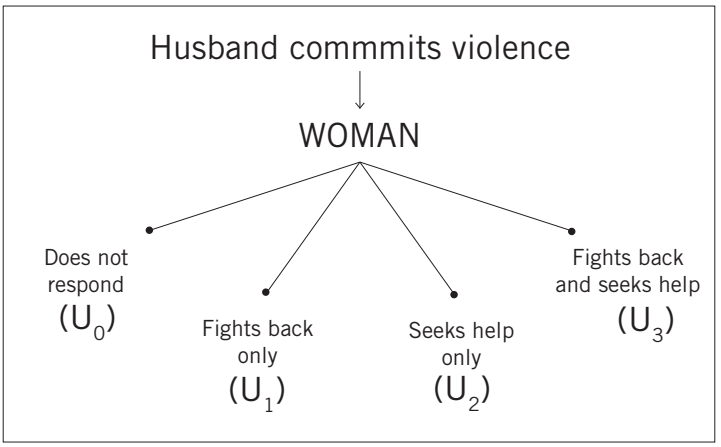


Figure 7. Decision tree of woman

Logically, the rational woman, given violence, will choose the best for herself or prefer the strategy with the highest benefit.This can be modeled using the random utility theory, which holds that an individual makes his or her decision and choices among options to maximize his or her utility or satisfaction, subject to probabilistic variation constraints that take into account uncertainty and unobserved attributes [Manski 1977].We will use the random utility model as the basic specification of the utility generated by alternative $j (j \in R = \{0,1,2,3\})$:

$$U_j = V_j + \varepsilon_j \tag{2}$$

where V_j is the deterministic part of the utility depending on individual and alternative-specific factors; and ε_j is random error or the stochastic component of the utility.

The deterministic part of woman's utility function U_j for each alternative j is affected by her individual socioeconomic characteristics W, the socioeconomic characteristics of her husband M, the characteristics of their marriage X, the level or characteristics of violence $\boldsymbol{v}$, and the characteristics specific to the alternative j, S, such that

$$U_{ji} = V_{ji}(W_i, M_i, H_i, v_i, S_j) + \varepsilon_j \tag{3}$$

where j denotes the choice alternative
i denotes the individual
W denotes the woman's socioeconomic characteristics
M denotes the husband's socioeconomic characteristics
H denotes the characteristics of the marriage
v denotes the level or characteristics of violence
S denotes the characteristics specific to alternative j

We can infer from the choices a woman makes how she ranks some of the alternatives. Thus, if a woman chooses not to respond, it must be the case that $U_{0i} > U_{1i}$, $U_{0i} > U_{2i}$, *and* $U_{0i} > U_{3i}$. We will assume that ε_{ji} is independently distributed across all alternatives and observations and has type-I extreme value distribution [Ben-Akiva and Lerman 1985]; that is,

$$F(\varepsilon_j) = H_j(U_j) = \exp(-\exp(-\varepsilon_j)) = \exp(-\exp(-(U_j - V_j))) \tag{4}$$

If the ε_{ji} are independently distributed, the differences in the ε are distributed logistic and a multinomial logit can be used to estimate the differences in the parameters of the independent variables [Maddala 1994].

The woman is now faced with the maximization problem:

$$U_i = \max R[U_0, U_1, U_2, U_3 \tag{5}$$

In the multinomial logit model, the probability that a woman will choose a particular alternative j over the other alternatives in the choice set R is defined as

$$\begin{aligned} P_j(\mathrm{U_j} > \mathrm{U_1},\ldots,\mathrm{U_k}) &= P_j\,(\varepsilon_j > \mathrm{V_1}+\varepsilon_1-\mathrm{V_j},\ldots,\mathrm{V_k}+\varepsilon_k-\mathrm{V_j}) \;\; \forall j \neq k;\, j,k \in \mathrm{R} \\ &= P_j(V_j + \varepsilon_j \geq V_k + \varepsilon_k) \\ &= P_j(\varepsilon_k - \varepsilon_j \geq V_j - V_k) \end{aligned} \tag{6}$$

where k denotes the number of alternatives contained in choice set R. Under assumptions (2) and (4), it can be rewritten as

$$\mathrm{P(y = j)} = \frac{e^{V_j}}{1 + \sum_{k=1}^{k} e^{V_k}}, \forall j = 1,\ldots,k. \tag{7}$$

In practice, estimating the model requires the coefficients of a reference strategy or alternative to be normalized to zero because the probabilities for all the choices must sum up to unity [Greene 2003]. Hence, for *k* choices, only (*k*-1) parameters can be identified and estimated. The probability of being in the reference strategy *0* is given by

$$P(y = 0) = \frac{1}{1 + \sum_{k=1}^{k} e^{V_k}}, \forall j = 1,...,k. \quad (8)$$

The natural logarithm of the odd ratio of equations (7) and (8) gives the estimating equation [Greene 2003] as

$$\ln \frac{P(y = j)}{P(y = 0)} = V_{ij} = \beta_j X_i, \forall j = 1,...,k. \quad (9)$$

where X_i denotes the vector of attributes of alternative *j*
β denotes the coefficient vector

This denotes the relative probability of choosing strategy j={1,2,3} to the probability of choosing the reference strategy = 0. The estimated coefficients for each choice, therefore, reflect the effects of the variables in vector X_i on the likelihood of the woman choosing that alternative relative to the reference strategy.

On the other hand, the coefficients of each explanatory variable for the reference group can be computed as the negative of the sum of its parameters for strategies (1), (2) and (3) [Hill 1983]. The formula is defined as

$$\beta_0 = -(\beta_1 + \beta_2 + \beta_3) \quad (10)$$

The marginal effects or partial derivatives ($\partial P_j / \partial x_i$) are computed by differentiating equation (9) with respect to the particular explanatory or independent variable. The derivation technique implicitly indicates that the sign or the magnitude of the marginal effects does not need to bear any relationship with the sign of the coefficients used in obtaining them [Greene 2003]. These are computed from the multinomial logit results using the equation

$$\frac{\partial P_j}{\partial x_i} = P_j(\beta_j - \sum_{m=1}^{k} P_m \beta_m), \forall j = 1,2,...,m,k. \quad (11)$$

where x_i denotes the mean value of X_i
k denotes an alternative in the set choice.

These can be converted to quasi elasticities by using:

$$\eta_{ji} = x_i\left(\frac{\partial P_j}{\partial x_i}\right) \tag{12}$$

The quasi-elasticity or change in predicted probabilities represents the percentage point change in P_j upon a one percent increase in X_i. These elasticities are easier to interpret and more explicit than the coefficients. Just like the derivatives, they may change signs and values when evaluated at different points.

From probability (7), Ali [2008] derived the expected utility from choosing alternative j to be expressed as

$$E(U) = \ln\sum_{j=1}^{k} e^{V_j} + \gamma \tag{13}$$

where γ is Euler's constant.

Effectively, the alternative with the highest expected utility will be taken by the woman as her best strategy in response to her husband's violence.

This formal representation of the woman's choice situation is in some ways a significant simplification of the real-world situation. For instance, it does not take into account the effect of the time lag and other time-bound or alternative-specific variables that characterize coping, whether public or private, as a process. It is possible that the choice set is altered if the woman is experiencing episodes of violence over a certain period of time, probably developing other coping mechanisms and altering the decision tree of the woman. The alternatives may expand or be reduced based on the outcomes of her response to the previous instance of violence. The limitations in the data set, however, cannot capture these changes.

A theoretical analysis can still be worthwhile because we hope to have retained the basic structure of the problem. In fact, the advantage of this model is its flexibility in application because it does not preclude the scenario in which the woman is the perpetrator and her husband is the victim. If the husband is the victim, he will face the same set of response choices that can be understood within the frame of random utility maximization.

The focus of the study will revolve around the estimation of equations (7) and (8) using equation (9). For every woman who experienced domestic violence, she evaluates these strategies such that the expected utility from each alternative varies. We would like to examine those differences in their responses and help-seeking behavior by estimating the differences in the factors that affect V_j across the four strategies we have identified. Furthermore, in order to provide insights for the implementation of the law, our objective is to look at the factors that affect the decision of a woman to involve a third party (strategies (3) and (4)) in the conflict to end the violence or to mitigate its consequences in reference to other alternatives available to her (strategies (1) and (2)). We examine this by computing and using the estimates from equations (11) and (12).

5. Methodology

5.1. Estimating equation

Women's response to domestic violence can be seen as an economic choice problem over discrete alternatives in the context of random utility maximization. The utility derived from each alternative j is defined by equation (3). The probability that an alternative will be chosen over a base strategy is given by the odd ratio of equations (7) and (8). The natural logarithm of the odd ratio gives the estimating equation defined by equation (9). It can be expanded as

$$V_{ji} = \beta W_i + \beta M_i + \beta H_i + \beta v_i + \beta S_j + \varepsilon_j \qquad (14)$$

where j denotes the choice alternative
i denotes the individual
W denotes the woman's socioeconomic characteristics
M denotes the husband's socioeconomic characteristics
H denotes the characteristics of the marriage
v denotes the level or characteristics of violence
S denotes the characteristics specific to alternative j
β denotes the coefficient vector
ε denotes the random error term

Equation (14) is a linear function of (a) parameters to be estimated and (b) attributes of the alternatives $V_j = X'_j \beta$ where X_j is a k vector of attributes

of alternative j and β is a k vector of parameters. This allows the terms to be able to shift the slope and intercept of the function.

Multinomial logit regression is the estimation method to be used. It is deemed the most appropriate method because of the presence of more than two alternatives in the choice set of women's responses, R, and because we want to explore the differences in the expected utility of each choice for every individual woman in reference to the base strategy.

The multinomial logit model assumes that the stochastic terms, ε_{ji}, are independently distributed. Specification tests were performed to validate that the independence of irrelevant alternative (IIA) property is not violated. This assumption implies that the ratio of the probabilities of choosing any two alternatives is independent of the other alternatives in the choice set. If the IIA property holds, the choice probabilities of the alternatives are multinomial logit defined as equation (7) [McFadden 1973].

The complete equation to be estimated is shown below:

$$\begin{aligned} V_{ji} = {} & \beta_1 \text{WOMAGE} + \beta_2 \text{WOMEDUC} + \beta_3 \text{WOMEMPLOY} \\ & + \beta_4 \text{CEBUANO} + \beta_5 \text{CATHOLIC} + \beta_6 \text{MANAGE} \\ & + \beta_7 \text{MANEDUC} + \beta_8 \text{MANEMPLOY} + \beta_9 \text{URBAN} \\ & + \beta_{10} \text{MARIDUR1} + \beta_{11} \text{MARIDUR2} + \beta_{12} \text{MARIDUR3} \\ & + \beta_{13} \text{MARIDUR4} + \beta_{14} \text{EARNMOREW} + \beta_{15} \text{CHILDUND5} \\ & + \beta_{16} \text{WEALTHQ1} + \beta_{17} \text{WEALTHQ2} + \beta_{18} \text{WEALTHQ3} \\ & + \beta_{19} \text{WEALTHQ4} + \beta_{20} \text{PHYSVONLY} + \beta_{21} \text{SEXVIOLONLY} \\ & + \beta_{22} \text{EXPALLVIOL} + \beta_{23} \text{PHYSEXONLY} + \beta_{24} \text{OTHCOMB} \\ & + \beta_{25} \text{PHYSCONSQ} + \beta_{26} \text{PSYCHCONSQ} \\ & + \beta_{27} \text{UNEMPCONSQ} + \beta_{28} \text{MOTHERBEAT} \\ & + \beta_{29} \text{TVFREQ} + \beta_{30} \text{OTHERMEMS} + \varepsilon_{ij} \end{aligned} \tag{15}$$

5.2. Data

We used the data from the 2008 National Demographic and Health Survey, a nationally representative survey of women aged 15-49. The survey obtained detailed information on fertility levels, marriage, and other health issues involving women. For the first time, it gathered information on violence against women through a separate questionnaire (Women's Safety Questionnaire) that uses the conflict tactics scale. The questionnaire asks categorical questions on women's experience of interpersonal violence, including acts of physical, sexual, and emotional violence.

In order to investigate the differences in responses and help-seeking behavior, we regress the woman's strategy choice against a set of explanatory and control variables. The selection of these variables is guided by previous studies reviewed in section 2, economic theory and the characteristics of the alternatives under consideration.

5.2.1. Women's response

In this research, a dummy variable is used as a dependent variable with four values. The women's response variable (WOMRESPONSE) specifies her choice strategy in response to the violence (fight back only, seek help only, fight back and seek help, or no response at all).

5.2.2. Woman's characteristics

We included characteristics of the woman to capture her socioeconomic context and stature. Aside from her age (WOMAGE), we included human capital variables such as employment status (WOMEMPLOY) and education in single years (WOMEDUC). These indicators will reveal whether and to what extent these additional human capital investments affect her choice of strategy.

A more educated woman will more likely respond rather than be silent to violence because she knows her rights and available options to deal with her violent husband. Most likely, she may be aware of existing legal recourses available to her such as RA 9262, and hence seek intervention from third parties. Employment, on the other hand, indicates her contribution to the household's stream of resources, her individual productivity, and in turn reflects the economic dependence of the woman on the marriage.

We also included controls to reflect cultural beliefs and context in recognition of their effect on the woman's perceived acceptability or justification of violence, hence her judgment. Religion (CATHOLIC) and ethnicity (CEBUANO) capture the effect the information provided or practices specific to their sociocultural group that may factor into the judgment of the woman.

5.2.3. Partner's characteristics

The vector of socioeconomic characteristics of the partner was included to control for the qualities and attributes of the perpetrator of the violence. These characteristics as determinants of the violence are irrelevant

because we take the violence as given. We are interested, however, in whether these are still factored in by the woman in her response, indicative also of the bargaining process where the violence-response relationship is located. We included the husband's age (MANAGE), education in single years (MANEDUC), and his employment status (MANEMPLOY) in the regression.

It is possible the woman will lose gains from the human capital, productivity, and the resources the husband brings into the marriage if she adversely responds or retaliates. Likewise, the woman calculates how the husband will respond in turn to assess her success in the alternative she will choose.

5.2.4. Marriage characteristics

Because we assume that the woman entered the marriage in view of the higher payoffs compared to being single, it implies that there are relationship-specific investments that increase or decrease the expected utility from each response alternative. We may call these investments as *marital capital*, which the literature has identified as a strong correlate of domestic violence. In turn, we examine whether this marital capital affects how she differentiates the response strategies.

The relationship's duration in years is clustered into dummy variables (MARIDUR1-5) and was included in the regression. The increase in duration may imply improved tolerance or patience to domestic violence, thus the woman choosing not to fight back. Likewise, it may imply less fractious disagreement or bargaining, and hence would necessitate milder forms of responses.

Children are considered investments specific to the relationships in view of both the genetic and material requirements needed to raise or sustain an offspring. Similarly, they are agents exposed to the risk and consequences of domestic violence. When a woman fights back or seeks help, she may consider the outcome for the children—that is, a broken fatherless family—and incorporate it as a factor in her individual utility function. Thus, we included the number of children under five years old (CHILDUND5) to control for this effect.

If we also assume violence to be a function of intrahousehold resource bargaining, the differences in the probability of violence, and in turn the probability of woman's response, may be attributed to the differences in the household's total income stream. It is then necessary to control for the differences in resource levels. We divide the households into five groups,

according to their wealth index[2] (WEALTHQ). The household may be poorest, poor, middle, rich, richest. We also included a dummy variable to indicate whether the woman earns more than her husband (EARNMOREW) and therefore contributes more to the resource pool. These two indicators capture that a woman might be loss-averse and choose not to retaliate. It essentially captures the marriage-specific utility she may be preserving in choosing a strategy.

5.2.5. Violence characteristics

We utilize the violence information available in the NDHS to construct a vector of characteristics of violence and estimate its effects on women's responses. The NDHS used a modified CTS developed by Straus [1979] to gather information about the experiences of violence of married women in the last 12 months. This measurement tool does not take into account the reasons or circumstances that describe and characterize the violence. This measure defines violence as the instruments or acts employed by each spouse to deal with a given conflict. The context of the violence was measured and controlled for separately.

We assume that domestic violence is not a random or plainly deviant phenomenon. Instead, it originates from a reason and sustains patterns and effects worthy of examination. We further assume that women's responses (fighting back or seeking help) to the violence can also be analysed in the context of the conflict theory. The behavior of the woman is motivated by her experience of violence and, in turn, an instrument in dealing with the conflict between them.

The survey asked married women different questions pertaining to a particular kind of violence: verbal, physical, emotional, or economic [NDHS 2008]. Sample questions include: "Does/Did your husband/partner/boyfriend ever push you? Slap you? Physically force you to have sexual intercourse?" In cases when the answer was "yes", women were asked about the frequency of the act in the 12 months preceding the survey (not at all, sometimes, or often).

[2] Wealth index is defined as the proxy measure of the long-term standard of living of the household. It is based on household ownership of durable goods, dwelling characteristics, source of drinking water, type of sanitation facilities, and other characteristics related to the household's socioeconomic status [NDHS 2008].

We grouped women based on their affirmative answers to the CTS list. We grouped the women who experienced any of the items on the list and created dummy variables defined as follows: those who experienced physical violence only (PHYSVONLY), sexual violence only (SEXVONLY), other violence only (OTHERVONLY), combination of physical and sexual violence (PHYSEXVONLY), other combinations (OTHCOMB), and all kinds of violence (EXPALLVIOL). The dummies are important in assessing the extent to which the characteristics of violence affect the expected utility of each of the woman's strategy choices. Not all forms of violence urge the woman to fight back or involve a third party. As the literature suggests, her response is proportionate to the severity of the violence.

We also performed internal consistency reliability tests (Cronbach coefficient of reliability) to ascertain the effectiveness of CTS as a violence measurement tool. A coefficient alpha value of ≥0.70 was considered significant [Anderson and Leigh 2010]. This would suggest that each specific item can be treated separately as evidence for a particular kind of violence and is a reliable indicator of the conflict behaviors that the sample experienced.

Dummy variables were included for physical (PHYSCONSQ), unemployment (UNEMPCONSQ), and psychological consequences (PSYCHCONSQ) experienced as a result of the violence. We hypothesize that her response will be commensurate to the consequences of violence too. Finally, a dummy for violence history or previous exposure of the woman was added. MOTHERBEAT = 1 means that the woman's mother was beaten by her father. The history of exposure to violence can be assumed as information about the adverse consequences of domestic violence for the woman and in turn makes her become averse to it. The aversion may be significant to her choice of strategy when she is violated.

5.2.6. Other variables

Other controls that may differentiate the strategies are also included. URBAN indicates whether the household is located in an urban or rural area. Features of the geographical location of the household may expand the choices of the woman either by making available other recourse to protect herself or, indirectly, by making her more independent as an individual.

TVFREQ captures her exposure to TV media. A woman who watches TV frequently may indicate exposure to more ideas/information that she may use in evaluating her set of alternatives.

Lastly, OTHERMEMS indicates the number of household members living with the woman to indicate the immediate informal network of the woman and proximity of third-party help. The presence of other family members may also have aggravating and/or mitigating circumstances to the experience of the violence, which alters the expected utility from each alternative.

6. Analysis of results

As discussed, regressions were run in order to address the research question: What are the determinants and factors that affect the differences among responses and help-seeking behavior of women victims? To answer this, the paper examines the significance of the variables that affect the deterministic part of the utility for every alternative *j*. Equation (15) was estimated using the multinomial logit estimation method.

Primarily, the validity of the IIA assumption is tested by suest-based Hausman test. The null hypothesis that the odds are independent of other alternatives cannot be rejected. Therefore, the multinomial logit method can be used to study the differences among the choice set of women's responses, *R* (Table 2). The Wald likelihood ratio (χ_2) value of 134338.71 is greater than the critical chi-square value at 1 percent level of significance. This confirms that all the slope coefficients are significantly different from zero and the explanatory variables are collectively significant in explaining the different strategy choices of the woman.

Table 2. Suest-based Hausman test of IIA assumption (n=1254)
Ho: Odds (Outcome J vs Outcome K) are independent of other alternatives

Omitted	chi2	df	P>chi2	evidence
Fight back	30.186	58	1.00	for Ho
Seek help	43.583	58	0.96	for Ho
Both	31.406	58	1.00	for Ho

Table 3 contains the results of the estimated multinomial logit model. The log-likelihood value for the model is -1106.915.

Table 3. Multinomial logit estimation in terms of log-odds (Base = No response (0))

	Fight back only		Seek help only		Fight back and seek help		No response
Variables	**Coef.**	**Robust Std Err**	**Coef.**	**Robust Std Err**	**Coef.**	**Robust Std Err**	**Coef.**
Woman's characteristics							
Age	0.0068	0.0182	0.0106	0.0382	0.0185	0.0296	-0.0359
Education years	-0.0445***	0.0238	-0.0005	0.0337	-0.0179	0.0370	0.0629
Employment	-0.0528	0.1599	-0.0850	0.2585	0.1467	0.2687	-0.0090
Cebuano	0.3557**	0.1769	0.2883	0.2128	0.1207	0.3234	-0.7647
Catholic	-0.2899	0.1932	-0.5285**	0.2454	-0.4518	0.3437	1.2702
Partner's characteristics							
Age	-0.0159	0.0142	0.0191	0.0179	-0.0297	0.0251	0.0265
Education years	0.0182	0.0225	-0.0353	0.0437	0.0629***	0.0353	-0.0458
Employment	-0.3117	0.3652	-0.6604	0.7059	0.3197	0.6716	0.6524
Marriage characteristics							
Marital duration 1	-0.2361	0.4105	0.5832	0.7777	-0.6548	0.7284	0.3077
Marital duration 2	-0.4064	0.3354	0.0389	0.6474	-0.6365	0.5652	1.0039
Marital duration 3	-0.6084**	0.2634	0.1391	0.4906	-0.8998***	0.5039	1.3691
Marital duration 4	-0.3589	0.3107	-0.6829***	0.4101	-0.9188**	0.4672	1.9606
Woman earns more	0.1432	0.1905	0.0806	0.3770	-0.1981	0.3343	-0.0256
Children under 5	0.1693**	0.0861	-0.0042	0.1341	0.0438	0.1207	-0.2088
Wealth quintile 1	-0.6220	0.4179	0.9562***	0.5374	-0.1960	0.5240	-0.1382
Wealth quintile 2	-0.3029	0.3157	0.1760	0.5028	-0.6351	0.4819	0.7620
Wealth quintile 3	-0.0051	0.3801	0.7557	0.5749	-0.8035	0.5614	0.0530
Wealth Quintile 4	-0.0978	0.3157	0.5460	0.5608	-0.9096***	0.5154	0.4614
Violence characteristics							
Physical only	1.5149*	0.2563	0.6375	0.4725	0.5435	0.4345	-2.6959
Sexual only	0.9211*	0.2451	0.1658	0.4660	-0.8079	0.7279	-0.2790
Experienced all kinds	1.1777*	0.3199	0.9227**	0.3806	1.2629*	0.3842	-3.3632
Physical and sexual	1.0480***	0.6032	1.1190***	0.6303	-0.1808	1.0977	-1.9862
Other combinations	1.3675*	0.1900	1.0116*	0.3132	0.9396**	0.3751	-3.3186
Physical consequence	0.6784*	0.2185	1.4771*	0.2788	1.9891*	0.2497	-4.1447
Psychological conseq	0.9361*	0.1794	0.9239*	0.2969	1.0334*	0.2700	-2.8934
Unemployment conseq	0.4172	0.2551	-0.3997*	0.4273	-0.2261	0.4146	0.2085
Mother was beaten	0.6117*	0.1558	0.4102***	0.2193	0.4925**	0.2136	-1.5144
Other characteristics							
Urban	-0.0341	0.2208	0.0456	0.2452	0.0359	0.2675	-0.0474
Frequency of TV	0.0884	0.1757	0.7737***	0.4009	0.8656*	0.3200	-1.7277
Other members	0.0034	0.0497	-0.0897	0.0731	-0.0768	0.0870	0.1632
Constant	-1.5637	0.6951	-2.9484**	1.3005	-4.1366**	1.0092	8.6487
Number of obs	1254, adjusted for 97 clusters						
Wald chi2 (90)	134338.71						
Pseudo R2	0.1658						

* Significant at 0.01 level, **Significant at 0.05 level, *** Significant at 0.10 level.

As Greene notes [2003], the coefficients in this model (in terms of the multinomial log-odds and the relative risk ratio) are difficult to interpret. As such, after the estimation using equations (7) and (8), we compute for the marginal effects and the quasi-elasticities using equations (11) and (12). Our analysis will focus on the signs and magnitudes of the marginal effects, reported in Table 4, because they are more explicit and easier to interpret. Given the discrete nature of the variables in the model (except for age, education, and number of children), we deem it more appropriate to consider in our discussion the marginal effects than the quasi-elasticities, which rely on the value of the mean.

In line with the paper's objective, we chose "no response" as the reference outcome and compare how each explanatory variable increases or decreases the relative marginal probability of choosing to respond. The three strategies (1, 2, or 3) can be considered collectively as the choice of a woman to respond. The results show that the marginal effect of the set of explanatory variables varies across the groups in terms of significance, significance level, and signs.

Table 4. Marginal effects of multinomial logit estimates (n = 1,254)

Variable	Mean	Fight back only	Seek help only	Fight back and seek help	No response
Woman's characteristics					
Age	32.2137	0.0008	0.0005	0.0008	-0.0021
Education	9.2456	-0.0078***	0.0007	-0.0003	0.0075
Employment	0.5104	-0.0102	-0.0049	0.0088	0.0064
Cebuano	0.3541	0.0597***	0.0117	0.0004	-0.0718**
Catholic	0.7990	-0.0375	-0.0288	-0.0192	0.0855**
Partner's characteristics					
Age	35.7767	-0.0028	0.0015	-0.0014	0.0027
Education	8.2528	0.0030	-0.0027	0.0032	-0.0035
Employment	0.9753	-0.0491	-0.0460	0.0203	0.0748
Marriage characteristics					
Marital duration 1	0.2259	-0.0445	0.0491	-0.2939	0.0248
Marital duration 2	0.2383	-0.0637	0.0108	-0.0254	0.0784
Marital duration 3	0.2069	-0.0941**	0.0214	-0.0339**	0.1066**
Marital duration 4	0.1572	-0.0445	-0.0290	-0.0334**	0.1069**
Woman earns more	0.1308	0.0280	0.0033	-0.0118	-0.0195
No. of children under 5	1.0598	0.0303**	-0.0031	0.0001	-0.0273
Wealth quintile 1	0.3062	-0.0266	0.0726***	-0.0132	-0.0328

Variable	Mean	Fight back only	Seek help only	Fight back and seek help	No response
Wealth quintile 2	0.2617	-0.0487	0.0185	-0.0272	0.0574
Wealth quintile 3	0.1988	-0.0074	0.0608	-0.0370**	-0.0165
Wealth quintile 4	0.1513	-0.0187	0.0455	-0.0377**	0.0109
Violence and consequences					
Physical violence only	0.0981	0.3106*	0.0011	-0.0041	-0.3076*
Sexual violence only	0.0853	0.2035*	-0.0068	-0.0403**	-0.1563*
Experienced all kinds	0.0965	0.1959*	0.0287	0.0542	-0.2789*
Physical and sexual violence	0.0207	0.1950	0.0622	-0.0263	-0.2309**
Other combinations	0.2552	0.2393*	0.0336	0.0238	-0.2967*
Physical consequences	0.2161	0.0453*	0.0861*	0.1359*	-0.2674*
Psychological conseq.	0.4936	0.1400*	0.0377**	0.0384*	-0.2161*
Unemployment consequence	0.0742	0.0924***	-0.0260	-0.0152	-0.0511
Other characteristics					
Mother was beaten	0.2823	0.1025*	0.0131	0.0163	-0.1319*
Urban	0.4155	-0.0074	0.0032	0.0022	0.0020
Frequency of watching television	0.7895	0.0037	0.0368**	0.0349*	-0.0680**
Other Members	0.9537	0.0031	-0.0053	-0.0038	0.0060

* Significant at 0.01 level, **Significant at 0.05 level, *** Significant at 0.10 level.

What pushes women to respond or not? Similarly, what differentiates one response alternative from the other? We note the following significant observations from our regression results:

1) A more educated woman resorts less to fighting back but does not have a dominant response to spousal violence.

The signs of the woman's education variable reveal an interesting pattern. The expected sign for the education variable is positive for all response strategies because we expect a more educated woman to react to violence rather than keep silent about her experience. Yet among the three strategies, the marginal effect shows that a more educated woman will more likely seek help but will less likely fight back or do both. The sign for no response is positive, which could imply that an educated woman may not react at all. In terms of statistical significance, only the first strategy (fight back) is significant at 10 percent.

What does this say? The statistically significant negative sign for the first strategy suggests that a more educated woman will not hurt back

her husband. Yet at the same time, the insignificance of the variable in the other strategies suggests that it is uncertain how exactly education discriminates among the three remaining alternatives. While research points to the likelihood that women who are more educated are less likely to experience and suffer from violence per se and lower levels of education is a risk factor associated with domestic abuse (ICRW [2005]; WHO [2005]), the extent to which increased education drives a woman's propensity to a dominant response is inconclusive. As education increases, her attitude toward violence could change, viewing it more as unacceptable [United Nations 2010] but this would not necessarily link to a concrete response. Furthermore, she will be more likely to respond but she can be more calculating, because other contexts may matter in her help-seeking decision [ICRW 2005].

2) The woman as a mother takes her children into consideration in her response strategy.

The increase in the number of young and dependent children increases the probability of fighting back by 3 percent. Fighting back has the highest marginal effect among all response alternatives to violence, and the quasi-elasticity shows that having a child decreases the probability of being silent. This could imply that the woman realizes that her children are not only witnesses to violence but are also in fact exposed to the negative consequences of having a violent father. As a mother, she takes her children into consideration and chooses the expedient and immediate defense (fighting back) as the most effective response strategy.

Second, as theory and the consistent positive signs of this variable would suggest, the woman may be sharing a joint utility with her children such that she perceives a negative spillover if not direct consequence of violence for her offspring [Farmer and Tiefenthaler 1997]. Since these children are young and dependent, exposing them to violence is harmful to their welfare, which the woman seeks to mitigate immediately through fighting back. As a mother, her children are a significant and important part of her welfare.

3) The class (wealth quintile), employment, religion, and ethnicity of the woman, including her partner's characteristics, are not strong determinants of her response strategy.

The signs and statistical significance of these variables were not consistent across the different alternatives available to the woman. While

these contextual nuances are important considerations in understanding the situation of the woman, our estimation results show that there are other factors that determine the choices of the victims, and these backgrounds do not clearly differentiate one alternative from the other.

In terms of seeking third-party help, it would also mean that no particular class (either rich or poor), religion or ethnicity of women, when violated, has a higher propensity to do so.

4) A woman's coping strategy is always proportional or commensurate to the type of violence she experienced.

We note that the CTS used by NDHS provided an effective violence measurement tool because the Cronbach's alpha for each subscale of violence has value > 0.70. This would suggest that each specific item can be treated separately as evidence for a particular kind of violence and is a reliable indicator of the conflict behaviors that the women experienced.

Given this, the evidence provided by our estimation confirms our hypothesis. Among all the clusters of variables, the violence indicators have the most consistent significance levels and signs across the four alternatives. For example, if we analyse the Fight Back option relative to the No Response alternative, violence in any kind and combination provokes the woman and increases her likelihood of fighting back. The provocation solicits a propensity to defend herself, and in fact maintains utility by minimizing the violence's adverse repercussions.

Likewise, the severity of the violence leads to significant differences in the strategy choices of the woman. As the abuse becomes worse in form and combination, the higher probability for the woman is to retaliate rather than passively accept her husband's beating. For instance, our findings show that for a woman who experiences all kinds of violence in the last 12 months (physical, emotional, and sexual), the probability of fighting back increases substantially by 20 percent and the probability of keeping silent decreases by 27 percent.

The signs and the magnitudes could also point to the characteristic of fighting back as a response compared with seeking third-party help. It is possible that fighting back is chosen because it is the most immediate and certain form of defense. As much as all alternatives could stop her abusive husband, this method is the most proximate, the least costly, and urgently applicable. The woman can fight back immediately at the instance

of violence and would not need proof compared to the strategies that involve a third party.

5) *The consequences that arise from the abusive behavior are strong predictors of woman's strategy choices and spell the difference among the response alternatives.*

Interestingly, our findings show that the consequences spell the difference among the three response alternatives, in contrast to the violence variables (combination and type), which are insignificant for strategies that involve a third party ((2) and (3)).The dummies for psychological and physical consequences are statistically significant for all types of responses at 5 percent and 1 percent significance levels, and they consistently matter in all the alternatives presented.

What does this say? It means that when a woman seeks third-party intervention, she realizes that getting help or aid is faster or guaranteed when substantial and verifiable evidence of the adversity of the violence are present. Her experience of one form of violence alone does not determine help seeking. Rather, the only instance third-party intervention becomes apparent and *comparatively* necessary is when the consequences become visible and obvious. If physical consequences are sustained, the probability of seeking help from others [14 percent for (3) and 8 percent for (2)] is substantially higher than addressing it alone (4 percent for (1)).This would imply that the utility gained from dealing with it personally is insufficient or less compared to help seeking.

The results would support the findings of the Gap Assessment Report of USE RA 9262 (Undertaking Survivors' Experiences in accessing RA 9262). It documents instances in Visayas and Mindanao, for example, when some police officers would dismiss VAW incidents if there is no physical injury committed against the victim [USE RA 9262, 2011]. Seeking help is accessed compared to other responses if she can show evidence, in this case an injury or a consequence.

This then explains the difference between fighting back and seeking help. While the three response strategies are unordered and could all be effective, each strategy may have different requirements (implicit costs) and serve different utility levels. Fighting back could be a defense mechanism while seeking help is endeavored for relief to remedy the consequences. Consistent with the random utility maximization framework, the woman assesses each response action based on its suitability and appropriateness to her circumstances.

6) Frequency of watching television increases the odds of seeking third-party help.

The frequency of watching television is the only statistically significant variable that increases the odds of either (a) seeking help or (b) both fighting back and seeking help relative to not responding at all, both of which have a third-party help component.

While watching television can have a very broad effect especially because the dummy does not capture the exact kinds of material to which the woman is exposed, we could infer that frequent exposure to information through mass media empowers the woman to seek third-party help. This information may be about the possible recourses that are available to her. When given more information, women's understanding of their situation and contexts broadens, which help them cope with the violence.

This could also clarify our findings regarding the woman's years of education. The significance of this variable implies that information from television and mass media is different from information acquired through formal education. It is then possible that watching television could be more effective in increasing woman's propensity to avail herself of third-party help.

7) The presence of other members in the household does not have a straightforward effect on the woman's strategy.

Informal proximate networks affect the strategy decisions of the woman (Heise, Ellsberg, and Gottemoeller [1999]; ICRW [2002]). Other members in the household form part of this informal network and therefore the most proximate resource for seeking help. However, the results are insignificant, and the interpretation on whether the presence of other members increases the probability of responding to the violence is not straightforward.

In terms of the responses involving third parties, if we consider help seeking as referring to informal networks only, the negative sign could suggest that the woman asks less for third-party help because there is less need to *actively* seek help to defend herself since other members can easily help through easy verification/accessibility. Similarly, if help seeking will refer broadly to include help from formal institutions such as the barangay and the police, the negative sign could imply that the woman does not need formal intervention because her expectations/needs in invoking third-party help—either for healing, legal remedies, or health service—could already be supplied or fulfilled by other members of the household.

Regardless of the scope of third-party help, the insignificance of the results, even for the fight-back option, implies that the woman's response is not contingent on the presence of household members. They may have an effect on reducing the risk of domestic violence but not on the actions of the woman.

7. Conclusions and implications on the implementation of RA 9262

What can our regression estimates suggest to the implementation of RA 9262?

7.1. Economics of public intervention

In general, the economic approach tells us that the problem of domestic violence is twofold for the woman. If the woman can accept the costs of domestic violence, then intervention is inefficient and unjustified. On the flip side, the state plays a role in expanding the options and opportunities for the woman and ensuring that when they cannot settle or manage the violence by themselves, recourses from the state are available and accessible. Not all circumstances and experiences necessitate public intervention. As our findings suggest, the experience of the violence per se does not automatically lead her to invoke a third party. The woman discriminates among alternatives based on whether she can end the violence herself versus the circumstance when help is necessary. As such, the law should consider and take into consideration that every woman makes a choice and ranks these preferences.

7.2. Consequences of domestic violence

We note that the choice to seek help is contingent, and driven more by the materiality of the consequences, not on the experience of the violence per se. Women invoke third-party help and bring the issue to the domain of others because of the sustained substantial injuries and psychological consequences. This parallels and supports the insight from interviews with women who said they only reported to authorities or third parties when the violence became a survival issue beyond her effective control [Amnesty International 2009].

We note that RA 9262 substantially cuts the number of procedures required and makes it easier for women to acquire a protection order—that is, an ex parte protection order is granted if the court finds reasonable

grounds prior or without any conference [Supreme Court A.M. No. 04-10-11-SC] even without the burden of evidence.

However, it is yet to be implemented as such. USE RA 9262 [2011] has cited instances in which victims are not granted ex parte protection orders because judges would insist on conducting hearings for their request, which clearly violates the law. There are also discretions in which judges declare that the victim is not in physical danger or life-threatening situations and therefore dismiss the need for such protection. Based on earlier findings of the International Violence Against Women Survey (IVAWS) in 2005, women do not report because the police may not find it serious enough, would not believe, or would not be able to do anything [Johnson, Ollus, and Nevala 2008].

The law in itself provides remedies and structures procedures in favor of the victim, but these gaps in implementation persist, which lead women victims to still perceive formal institutions as ineffective in providing remedies and protection. The decision making of women will not change despite the law being in force because the materiality of evidence remains to be a burden that they need to present to access these services. There is need for human resource training among police officers, service providers, and the legal system to increase the capacity of institutions in handling such cases consistent with RA 9262, and in turn alter the woman's assessment of these third parties' viability.

7.3. Help seeking as a coping mechanism

Our results also show that, consistent with the behavioral model presented, women would fight back to defend themselves and would seek help to cope with the consequences of abuse. As such, the revealed preference of these women implies that the law and public institutions should focus on ensuring enough and effective relief programs for violated women. If the law can broaden the available remedies for women aside from legal protection—that is, assistance in injuries or counseling for distress—then her probability of seeking help might also increase as she foresees welfare gains from asking aid.

Note also that the third party represented by the variables refers broadly to any individual. The literature suggests that women might seek help from their informal networks rather than from legal and formal institutions because of issues of trust and confidentiality. The IVAWS asked Filipino women victims if they told others about the abuse. Of those who said

yes, 81 percent told their family members and only 24 percent reported to professionals [Johnson, Ollus, and Nevala 2008]. Therefore, even if the consequences urge women to seek help, it is possible that they may prefer not to report to institutions but seek help from their kin and friends. Because we do not have an indicator for this knowledge and relative access, we can only suggest that this is an area for consideration.

7.4. The role of public education and information

Information and education are important in empowering women to defend themselves and access various strategies whenever they are violated. Specifically, our findings show that the effect of the frequency of watching television is significant in determining whether the woman will seek help—that is, choose strategies (2) and (3). Note that the exposure to media can be broadly defined and it is uncertain what specific images or ideas from television empower women to seek help. Yet, it is sufficient to say that public information and access to various knowledge channels about family life, womanhood, and rights will affect her decision to involve a third party in her problem.

The power of information in differentiating among these alternatives and in increasing the probability of help seeking is important. USE RA 9262 [2011] conducted focus group discussions with women and found that many of them remain unaware of their rights and recourses under the law.

If we assume TV exposure as an indicator of media exposure in general, and the law strengthens media campaigns to educate women and give them information on the possible recourses made available by government institutions, it may actually improve women's reliance on these institutions and empower them to help themselves.

7.5. A more sensitive and responsive law

Her children, social class, and even relationship-specific attributes such as the duration of marriage may not be strong determinants but these still affect her judgment and strategy. On the one hand, this means that the law should serve all women and there is no basis to favor a specific class or characteristic of women. On the other hand, it also means that there is no single, one-size-fits-all method to provide relief and protection for victims. Our findings on the whole suggest that each woman evaluates each alternative in search of the highest possible utility after being beaten. The

most important consideration for the law is to continually strive to expand opportunities for women and ensure that relief is accessible, sensitive, and needs-responsive when they access it.

The data and interest for research on domestic violence remain underdeveloped. Future quantitative studies need a more extensive data set that would illustrate a clear association between the kind of violence, the consequences resulting from it, and the response of the women. If this data set becomes available, more robust quantitative studies can be done to validate our findings. Further, research that computes the magnitude of costs to the household and society can be undertaken, and a more comprehensive take on domestic violence can be arrived at through the economic framework. Lastly, we endorse the triangulation of our findings through other methodologies to uncover aspects probably overlooked by our study. For the law to be more responsive, for justice to be achieved, and for the society to be less tolerant toward violence, an integrative and interdisciplinary approach to this social problem is necessary and important.

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